

Find Duplicate File in System (View)

Given a list `paths` of directory info, including the directory path, and all the files with contents in this directory, return *all the duplicate files in the file system in terms of their paths*. You may return the answer in **any order**.

A group of duplicate files consists of at least two files that have the same content.

A single directory info string in the input list has the following format:

- `"root/d1/d2/.../dm f1.txt(f1_content) f2.txt(f2_content) ... fn.txt(fn_content)"`

It means there are n files (`f1.txt`, `f2.txt` ... `fn.txt`) with content (`f1_content`, `f2_content` ... `fn_content`) respectively in the directory `"root/d1/d2/.../dm"`. Note that $n \geq 1$ and $m \geq 0$. If $m = 0$, it means the directory is just the root directory.

The output is a list of groups of duplicate file paths. For each group, it contains all the file paths of the files that have the same content. A file path is a string that has the following format:

- `"directory_path/file_name.txt"`

Example 1:

Input: `paths = ["root/a 1.txt(abcd) 2.txt(efgh)", "root/c 3.txt(abcd)", "root/c/d 4.txt(efgh)", "root 4.txt(efgh)"]`

Output:

`[["root/a/2.txt", "root/c/d/4.txt", "root/4.txt"], ["root/a/1.txt", "root/c/3.txt"]]`

Example 2:

Input: `paths = ["root/a 1.txt(abcd) 2.txt(efgh)", "root/c 3.txt(abcd)", "root/c/d 4.txt(efgh)"]`

Output: `[["root/a/2.txt", "root/c/d/4.txt"], ["root/a/1.txt", "root/c/3.txt"]]`

Constraints:

- $1 \leq \text{paths.length} \leq 2 \times 10^4$
- $1 \leq \text{paths}[i].\text{length} \leq 3000$
- $1 \leq \text{sum}(\text{paths}[i].\text{length}) \leq 5 \times 10^5$
- `paths[i]` consist of English letters, digits, `'/'`, `'.'`, `'('`, `')'`, and `' '`.
- You may assume no files or directories share the same name in the same directory.
- You may assume each given directory info represents a unique directory. A single blank space separates the directory path and file info.